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ABSTRACT

This 3-month pilot study explores the techniques to be used in a year-long research effort for documenting the interventions made by principals as change facilitators in improvement programs. Two frameworks--a taxonomy and an anatomy of intervention--provide a means of describing and analyzing the interventions of the two principals studied. The taxonomy defines six levels of intervention that distinguish the number of individuals targeted, the duration of the action, and the theme; the anatomy provides six dimensions that provide specific understanding and description of principals' behaviors as they intervene. Data based on the frameworks allow concrete, precise descriptions of the two principals' change facilitating styles. Use of these frameworks by principals could enhance their change facilitation skills and so enable them more effectively to plan actions to support improvement efforts. Seven figures provide key concepts of the change process and analyses of the two principals' levels of intervention and intervention behaviors. (PB)

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ANALYZING ADMINISTRATOR INTERVENTION BEHAVIORS

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R & D Report No. 3127

Paper presented at the
Southwest Educational Research Association
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Analyzing Administrator Intervention Behaviors[1,2]

How can principals' interventions be analyzed to understand better what principals do, and why -- a pilot study.

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The improvement of both educational personnel preparation and educational practice based on soundly grounded research results is a young enterprise. Compared to other more experienced disciplines, the lack of well-articulated frameworks or theories for engaging in educational research may in part account for this less-than-mature state of the art. Despite this lack, the educational community to varying degrees appears to share a common posture, elegantly stated by Wigginton (1980), about the value of change as a strategy for improving practice:

> Above all, move. Refuse to accept the status quo. Refuse to allow yourself to believe that you have finally found "the way." Know that despite the fact public schools are less than perfect learning environments, within them exciting and creative environments can be nourished where genuine learning does take place; with sensitive leadership those environments can spread within the system to infect the whole and to embrace the surrounding communities and the larger community of man to the ultimate benefit of all (from Introduction to Foxfire 6).

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[1]The research described herein was conducted under contract with the National Institute of Education. The opinions expressed are those of the author and do not necessarily reflect the position or policy of the National Institute of Education, and no endorsement by the National Institute of Education should be inferred.

[2]Paper presented at the annual meeting of the Southwest Educational Research Association, Dallas, 1981.

It is unlikely that Wigginton proposes "change just for change sake." The question then becomes, how to focus or direct change efforts. As a result of recent examination and research there seems to be consensus that points to three groups of variables that account for or contribute to the outcomes of more "effective schools." These factors are: leadership, teaching personnel, and curriculum and instruction (Tursman, 1981). Investigations by a number of journalists interested in factors contributing to effective schools reinforce the importance of strong leadership at the school building level (Tursman, 1981).

Research at the Texas Research and Development Center is currently focusing on the roles and behaviors of the principal as critical factors contributing to the effectiveness of the improvement process. In order to explore further the role of the principal and what principals do as facilitators of change, a major research study was designed which would focus on the activities engaged in by the principal whose faculty were involved in the process of change. Before launching the year-long investigation, a pilot study was designed to test the instrumentation, methodology, and the data collection and analysis procedures. This paper reports on the efforts and results of collecting and analyzing intervention data of principals from the pilot study.

Two other papers provide additional information and data from the pilot study: in "A Pilot Test of Methods for Documenting Principals' Interventions," Griffin, Goldstein and Hall (1981) report on the efforts explored for determining the best means of documenting the interventions of principals; and Rutherford (1981) discusses the relationship of plans followed by principals and the functions they performed in "The Interventions and Plans Principals Make When Facilitating Change."

Background

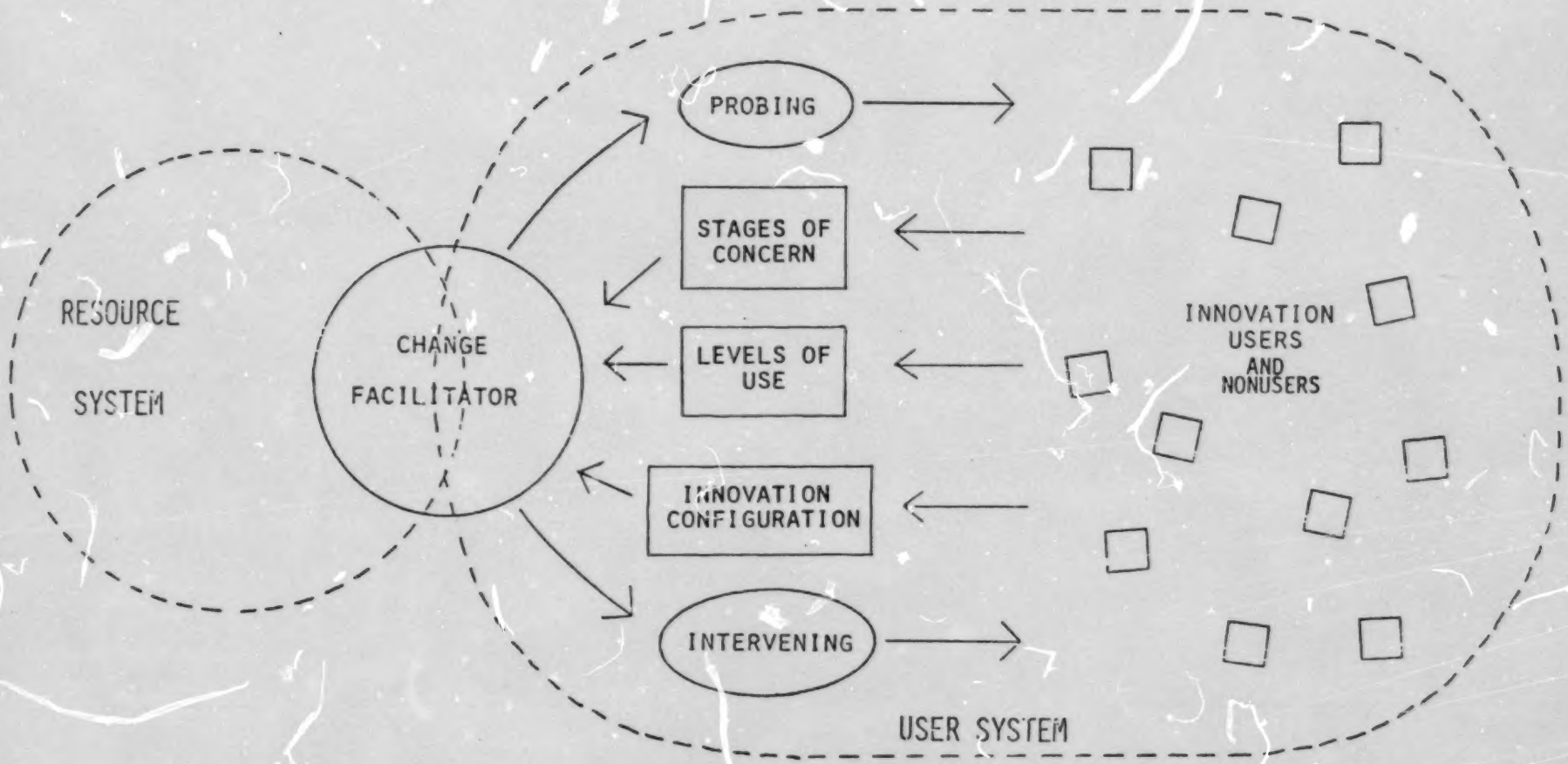
For the past several years the Research on Concerns-Based Adoption Project at the Research and Development Center for Teacher Education, The University of Texas at Austin, has been involved in the study of change. Initially this research focused at the individual user level and resulted in initial verification of key concepts and measures which provided understanding about how the individual experiences the change process. These concepts are part of the Concerns-Based Adoption Model (CBAM) (Hall, Wallace & Dossett, 1973). One part of the CBAM is a diagnostic component made up of several key dimensions: two dimensions which describe the individual, Stages of Concern (SoC) (Hall & Rutherford, 1976) and Levels of Use (LoU) (Hall, Loucks, Rutherford & Newlove, 1975); and a third dimension which describes the innovation as it is being used, Innovation Configurations (Hall & Loucks, 1978).

The CBAM views change as a process that requires both the time and energy of people participating in the change, and resources to support their efforts. The CBAM perspective contends that the SoC and LoU of individuals and the configuration of the innovation they use can provide important diagnostic data for making informed decisions about the allocation of resources and support. Specifically, such diagnostic data could be used for designing and selecting appropriate interventions targeted at individuals in order to encourage and help them in their individual change efforts (see Figure 1).

In subsequent studies interventions were analyzed to illuminate this domain. Intervention research (Hord, et. al, 1979) resulted in the conceptualization and formal articulation of interventions, and of frameworks by which they

Figure 1

THE CONCERNS-BASED ADOPTION MODEL



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can be identified, classified, and described. Syntheses of field data and cross case analyses in a further intervention study (Hall, Hord & Griffin, 1980) resulted in the conviction that the principal can be a significant factor in the change process. Thus, as a next step to understand better the interventions made by the principal, as a special class of change facilitator (Figure 1), a study was designed to explore and document the interventions of principals as they and their faculties were engaged in a change experience.

This paper, as already noted, reports on the CBAM project's experiences in a three month pilot study in preparation for an intensive year-long research effort. The two frameworks which were used for collecting and describing the principals' behaviors as they intervened in the change process in their schools are presented. The application of the frameworks in the pilot study served as a test of their utility for analyzing the research data. How this was done is explained and research results for two principals are reported. An example of the framework's usefulness in characterizing principals' intervention "style" is illustrated Further, how the intervention frameworks may be utilized to help principals improve their change facilitation skills is proposed.

Conceptions of Interventions

Two frameworks, the Intervention Taxonomy and the Intervention Anatomy, have been developed for describing and analyzing interventions. Intervention(s) have been defined as action(s) or event(s) which influence use of an innovation (Hall, Zigarmi & Hord, 1979). The Intervention Taxonomy provides a way to classify the actions that occur as the change process unfolds. The Intervention Anatomy is then used to analyze an intervention in terms of its internal components. Both of these frameworks will be described in the following two sections.

Taxonomy of Interventions

Six levels of intervention have been conceptualized: Policy, Game Plan, Strategy, Tactic, Incident, Themes (Hall, Zigarmi & Hord, 1979). Five of these may be thought of as intentional or sponsored actions. The sponsored levels of interventions are distinguished generally by their size and magnitude or scope--more simply, the number of individuals targeted and the duration of the action. Definitions of the sponsored levels follow.

Policy. A policy is a rule or guideline which directs the procedures and actions of an organization. Policies affect most (if not all) of the individuals and are in effect for extended periods of time. Policies serve as the umbrella under which all programs and processes (innovations and those already in place) are governed.

Game Plan. A game plan is the overall plan of actions that are taken to implement the new program. It contains all aspects of the change effort, covers the full time period of the change process, and affects all persons directly or indirectly involved.

Strategy. A strategy is a framework for action, translating the design of the game plan into concrete action to be taken. Strategies cover a large portion of the change process time period and impact most of the users.

Tactic. A tactic operationalizes the strategies undertaken to affect attitudes toward or use of the innovation. Tactics cover a shorter time period than a strategy and affect many innovation users but not necessarily all of them.

Incident. An incident is the singular occurrence of an action or event. Incidents may be one of a kind happenings or they may aggregate into tactics and strategies. Incidents usually cover a very small amount of time and can be targeted at one or more individuals.

Sublevels further define incidents and tactics and reflect the degree of complexity of the action (Hord, Hall & Zigarmi, 1980):

An isolated incident -- a single action separated in space and time from other actions.

A simple incident -- a single action or interaction that is functionally related to other interventions.

A complex incident -- a set of related simple actions within a short time frame.

A single-complex tactic -- an interrelated set or collection

of different incident interventions that occurs during a relatively short time frame.

A chain tactic -- an ongoing series or repetitions of the same basic incident.

In this study, the intervention levels provide a way to gain insight into the principal's overall "map of action" as he or she facilitated change in the school.

Anatomy of Interventions

A second schema permits the analysis and identification of attributes of individual interventions. This analytic tool, which provides increasingly specific understanding and description of principals' behaviors as they intervene, is referred to as the Anatomy of Interventions (Hord, Hall & Zigarmi, 1980). The schema focuses attention on the internal dimensions of interventions. These dimensions, their definitions and examples follow.

Source. Person(s) who act or events that occur to influence individuals to change. Who are these persons? They might be staff developers, curriculum coordinators, principals, teachers, students, or even events such as snow storms which influence the change effort.

Targets. Person(s) toward whom the intervention is directed. The examples of Targets are the same as Sources except for the addition of the change effort/process as an additional Target. Some interventions are made which have the change process itself as the Target.

Function. The purpose(s) of the intervention. Seven general functions have been identified: (1) Developing supportive organizational arrangements, (2) Training, (3) Providing consultation and reinforcement, (4) Monitoring and evaluation, (5) External communication, (6) Dissemination, and (7) Impeding.

Medium. The mode or form of the action. Such modes might be face to face or a form(s) of written communication. Additional possibilities are audio-visual formats, communication by telephone, or the public media such as newspaper, radio, T.V., journals.

Flow. The direction of the action. The flow of interventions may be one way. There is action directed toward one or more persons who might respond, but there is no interaction. The flow could be interactive, that is, there could be an exchange of actions between the intervenor and the individual(s) being intervened upon.

Location. Where the intervention takes place. Examples would be the setting (campus or school unit building) where teachers or others are using or learning to use innovations, the central administration building, or training sites.

By using this schema, the various dimensions can be coded to reflect the where, how, why, and toward whom of any intervention.

Application of the Tools in the Pilot Study

In this section the testing of the Intervention Levels and Intervention Anatomy for collecting and analyzing the pilot study data is explained. Explicitly coded descriptions of principals' behaviors resulted from analysis of the research data. The behavior analysis of two of the principals will be reported. In a concluding section the two frameworks are used as a basis for speculating about the two principals' intervention "styles."

Collecting and Analyzing the Data

The pilot study was designed to explore techniques for documenting interventions and to test the Intervention Levels and Intervention Anatomy coding procedures. The sample of principals, methodology and research procedures are fully described in Griffin, Goldstein and Hall, 1981. In essence, principals were requested to report, on a regular basis, the actions they took in facilitating a change in their schools. Different principals were to report in different ways: by written log, by audio tape, by telephone and face-to-face interviews. They were asked to report their actions (What did you do?), the intent (Why did you do it?), the target(s) of the actions, how long the action took, and the possible effects of their actions. This information would capture the internal dimensions -- target, function, medium, flow, location -- or anatomy of their interventions. Each reported intervention was then coded. Through analysis of the total set of interventions, and their relative size, the level

of each intervention could be established. Such coding and classification would provide the basis for comparing and contrasting the behaviors of different principals.

Research Results

From interpretation and synthesis, principals' behaviors were classified by their levels and dimensions already described.

Analyzing levels of principals' interventions. As examples, several interventions from the data are provided to illustrate the various level classifications.

> Intervention A: The principal telephoned a parent to request that she work as a volunteer math aide in order to help a second grade teacher in the classroom.

This action would be labeled as an incident intervention because it is a single action. It was targeted at one math program user, the second grade teacher, and it consumed five minutes of time. This action was related to other interventions taken by the principal (e.g., Intervention B), but since this particular one contained a quick and single interaction, it is classified as a simple incident.

> Intervention B: The principal held a faculty meeting in which she reviewed a fourth grade teacher's concern about the broad "spread" of the math abilities of her pupils. The principal surveyed the other teachers to discover if they had similar problems. Then the principal stimulated teacher-to-teacher interaction in a problem-solving mode. The discussion resulted in the teachers recommending the use of volunteer parents to help.

In contrast to Intervention A, Intervention B is a set of related actions orchestrated by the principal with a single group of teachers in a thirty minute meeting. Thus, the degree of complexity is greater in Intervention B and it would be labeled a complex incident.

> Intervention C: Over a two week period the principal stopped in each of the seven teacher's classrooms in order to observe

and ascertain if new math materials, made in a recent workshop, were being used.

This chain tactic is classified thusly because it is a series of the same basic incident, repeated with each teacher during a two week period.

The levels of interventions for two of the principals are exhibited (Figure 2). It should be noted that the methods for obtaining data on the actions undertaken by the two principals differed: Principal A provided a written log. Principal B engaged in the compilation of a log stimulated by telephone reporting. Whether the difference in results is attributable to these different techniques is open to question (Griffin, Goldstein & Hall, 1981).

Principal A, who was in the first year of an implementation effort during the pilot study, reported a total of nineteen interventions. Half of his interventions were simple incidents and half were complex incidents. No tactics were reported, indicating that there were no repetitions by the principal of the same incident across teachers, nor were there sets of different but related incidents that would add up to a "single-complex tactic."

In contrast, Principal B in implementation year two, reported two chain tactics in a total of 25 interventions. The use of chain tactics, or a series of the same incidents, would suggest that the principal was systematically repeating actions targeted at individual teachers. Of the remaining 23 interventions, one-third were complex incidents and two-thirds were simple incidents.

The classification of principals' interventions by levels provides some insight into the relative magnitude or possible extent of impact of their actions. The high percentage of incidents engaged in by both principals in this study would suggest that their typical actions did not affect very many teachers at any one point in time. The relatively brief time span typical of incidents would indicate a relatively low total amount of time spent in intervening rela-

Figure 2

Analysis of Principals' Levels of Interventions

Principal A Year 1 Implementation - Written Log -		Principal B Year 2 Implementation - Telephone Log -
Number of Interventions		
9	Simple Incidents	15
10	Complex Incidents	8
0	Chain Tactics	2
19	Total Interventions	25

tive to this innovation during the three month period (assuming that our sample is accurate). An exception to this is illustrated by the enactment of two tactics by Principal B. Such tactics could require considerable additional time invested in intervening, and because more teachers are likely to be affected by tactic level interventions, there is potential for greater impact.

Coding internal dimensions of principals' interventions. Codification of each reported intervention of the two principals permits a closer examination of their intervention behaviors. To provide understanding about how this is done, two examples are provided from the interventions collected in the pilot study.

> Intervention D: The principal telephoned a consultant at the region service center and arranged to have a "make it-take it" math workshop at the center.

For this intervention the source is the principal, who is an implementation site decision maker. The consultant is the target, an extended user system member. The purpose of this action was to provide materials and resources, coded as a function under Developing Supportive Organizational Arrangements. The medium was telephone and the flow was interactive, as the principal and consultant discussed how the workshop should be arranged for deriving the desired outcomes. The principal placed the phone call from her office, thus the location is the implementation site office.

> Intervention E: The principal, during a teacher conference, discussed use of the new reading program with the teacher.

The principal again is the source, and the target is the teacher who is an individual user. The principal was encouraging use of the new program, a function subsumed under Providing Consultation and Reinforcement. The medium was face-to-face, and the flow was interactive, as they discussed points and exchanged views. This intervention occurred in the library, thus the location is coded implementation site "other" (not the office and not the classroom). Figures 3-7

reflect the various kinds of intervention dimensions which were utilized by the principals and the percentage of each kind. All of the various kinds of the dimensions of interventions in the coding schema are not listed; only those utilized by the two principals during the three month data collection period are cited. Through use of the anatomy framework the principals' interventions can be compared and contrasted.

Figure 3
Analysis of Principals' Behaviors
Through Use of Intervention Coding: Targets

Figures indicate percentage of total interventions by principal.

TARGETS*	Principal A %	Principal B %
1 Clients: Students		12.9
2 Individual User	52.6	35.5
3A Subset of Users as Individuals		3.2
3C Subset of Users as Whole Subset	10.5	6.5
4A All Users as Individuals		5.5
4C All Users as a Whole	21	22.6
8 Extended User System Decision Makers	10.5	
9 Extended User System Members: Parents		9.7
10 The Change Effort/Process	5.2	3.2

*Note: Principal B, on five occasions, intervened on multiple targets.

The two principals structured their interventions toward teachers and others in an array of ways. A brief explanation of these "targets" will add to understanding. Target 1, Students, is obvious and suggests action taken by the principal directly with students. Target 2 indicates that a specified intervention is provided to a single isolated user -- or teacher. An example of targeting a subset of teachers as individuals, 3A, would be intervening on each of a set of grade level teachers individually, whereas 3C would be intervening on the set of grade level teachers as a whole group. Target 4A represents focusing on

all teachers as individuals, one at a time, and 4C suggests that all the teachers as one group would be the target of a single intervention, as in a faculty meeting. Extended user system decision makers, Target 8, refers to persons outside the immediate user system who have decision-making responsibilities. Target 9, in this case is parents, and Target 10 is the change effort, or overall process of change.

The data suggest that Principal A spent half his actions (52.6%) addressing individual teachers. Nearly one-fourth of the time (21%) his actions were targeted toward all of the users of the new program as a whole group. On two occasions a subset of the users (kindergarten teachers and fourth grade teachers) were group targets (10.5%). A similar percentage of interventions (10.5%) was focused on extended user system decision makers, in this case, principals from other schools. Principal A focused on the process of change (see Intervention Anatomy, Hord, Hall & Zigarmi, 1980, for definition) for 5.2% of his interventions.

A third (35.5%) of Principal B's interventions were focused on individual users, one person per intervention, while nearly a fourth or 22.6% of her actions were targeted toward all the teachers as a total group. Students were the target of four interventions for 12.9% and parents were targeted in 9.7% of the principal's intervening actions. Subsets of teachers as a group -- first grade teachers and the fourth grade team -- received interventions for 6.5%. All of the teachers, one at a time, were intervention targets, for 6.5% of the intervening times. For 3.2% some of the teachers as individuals were the target and received the same intervention. This principal intervened on the change process once, 3.2% of her interventions.

Figure 4

Analysis of Principals' Behaviors
Through Use of Intervention Coding: Medium

	Principal A	Principal B
MEDIUM	%	%
1 Face-to-Face	78.9	88
2 Written	21	4
4 Telephone		8

The form of the action used by the principals is expressed as the "medium." Principal A used face-to-face delivery of 78.9% of interventions and used written forms for 21% of his interventions. Principal B for 88% of intervening engaged in face-to-face, 4% written and used the telephone for 8%.

Figure 5

Analysis of Principals' Behaviors
Through Use of Intervention Coding: Flow

	Principal A	Principal B
FLOW	%	%
1 One Way	42.1	32
2 Interactive	57.9	68

One way flow is just that -- action directed toward one or more persons without interaction. Principal A used one way flow (for example, sent a memo or made an announcement over the public address system) for 42.1% of his interventions and engaged interactively in 57.9% of his interventions. Principal B used one way flow 32% of her interventions and was interactive 68%.

Figure 6

Analysis of Principals' Behaviors
Through Use of Intervention Coding: Location

LOCATION	Principal A %	Principal B %
1A Implementation Site: Office	31.6	32
1B Implementation Site: Classroom	52.6	48
1C Implementation Site: Other	10.5	16
3 Extended User System	5.3	4

Location indicates where the intervention occurred or originated. Implementation site refers to the school campus where implementation is happening, in this case, in each of the principal's school buildings. The extended user system would be away from the implementation site but within related organizational and geographical boundaries. Principal A intervened in the school office area 31.6%, in classrooms 52.6%, in other areas of the school building 10.5%, and away from the school campus 5.3%. Principal B intervened in her office 32%, in classrooms 48%, in other school areas 16%, and outside the school campus 4%.

Figure 7

Analysis of Principals' Behaviors
Through Use of Intervention Coding: Function

FUNCTION	Principal A %	Principal B %
Developing Supportive Organizational Arrangements		
1C Managing/Scheduling		8
1D Staffing/Restructuring Roles	5.3	24
1E Seeking/Providing Materials/ Information/Space/Resources	21	4
Training		
2A Teaching New Knowledge/Skill/ Attitudes		8
Providing Consultation and Reinforcement		
3A Promoting/Encouraging Use	21	4

3B Reinforcing/Supporting Use	21	4
3C Consulting/Problem Solving	5.3	20
Monitoring and Evaluation		
4A Information Gathering	15.8	20
4C Reporting/Providing Feedback		4
External Communication		
5A Informing Outsiders		4
Disseminating		
6B Encouraging/Promoting Use by Outsiders	10.5	

Seven functions have been identified in the intervention coding schema. Principals A and B engaged in six. The labels supplied on Figure 7 are self explanatory. For fuller descriptions and more information about "function" coding, please refer to Hord, Hall and Zigarmi, 1980.

Principal A reported a total of 26.3% of interventions made for the purpose of developing supportive organizational arrangements for use of the innovation. He used many of his interventions to promote and encourage use (21%), reinforce and support (21%), and consult and problem solve (5.3%) with teachers about their use o the new program. 15.8% of his interventions were employed for gathering information in order to monitor use of the innovation. Principal A reported 10.5% disseminating interventions to encourage and promote use by others outside his implementation site.

Principal B, for the purpose of developing supportive organizational arrangements, used 36% of her interventions for this function. 8% of Principal B's interventions were used for training in use of the innovation. Consulting and problem solving composed 20% of Principal B's interventions with 4% for promoting and encouraging use, and 4% for reinforcing and supporting use. In order to monitor use of the innovation, Principal B gathered information (20% of the

interventions) and intervened with feedback (4%). Communicating to outsiders was done in 4% of her intervening activities.

Implications: Further Use of the Frameworks

Tentative applications of the intervention frameworks are currently being explored by CBAM project staff. In this concluding section of the paper the frameworks are used to describe the administrators' change facilitating "styles." In addition, using the frameworks is suggested as a means for an administrator to engage in analysis and study of his or her own interventions as a growth and improvement technique, in regard to guiding school change efforts.

Description of Two Intervention "Styles"

The use of the CBAM frameworks for coding administrators' intervention activities in the pilot study provided the tools and the information base for speculating about the two principals' change facilitating "styles."

Contrasting the two principals' actions. Reporting for several months through written log Principal A provided information about some of his activities during the first year of innovation implementation. Figure 2 reveals his engagement in nine "simple" incidents. Generally, the content of these incidents was the ordering and distribution of materials and supplies for teachers which he delivered to teachers. In addition to these contacts with teachers about the innovation, he interacted with them about their use of the innovation. The ten complex incidents in Figure 2 account for these interactions.

Principal B reported via telephone log the enactment of two chain tactics, exhibiting the same interventions individually across each member of the faculty. Each tactic was a set of monitoring actions focused on gaining information

from teachers about their use of the innovation and about materials they had made in a workshop. In year two of implementation, this principal engaged in more "simple" incidents than she did "complex" ones.

From a debriefing with the principal and synthesis of this information with the study data, it can be suggested that Principal B thinks at the "strategy" level (strategies are implemented through tactics and incidents, see Hall, Zigarmi & Hord, 1979). She engaged across the implementation period in such activities as: observing teachers in their classroom use and then providing feedback; routinely utilizing parents through an established system as resources and as supportive personnel (acting as innovation aides on request); serving as a substitute when teachers needed to be absent (thus having direct contact with students and the innovation), and following with a feedback conference with the teacher about pupil performance; reviewing and instructing substitute teachers in innovation use and initiating follow-up about "how it went."

Through examination of Figure 3, it is clear that the larger part of the interventions of Principal A and B targeted innovation users on an individual basis. All users as a whole were the second most frequent targets of both principals. Principal A focused on five different categories of targets. One of these (unlike Principal B) was decision makers in the extended user system, in this case other principals with whom the principal appeared to be promoting use of the new program. In contrast, Principal B distributed interventions across eight different targets, including students and parents.

Principal B engaged in a higher percentage of face-to-face interventions than Principal A, who utilized a far greater proportion of written interventions (Figure 4). This resulted in more interactive flow (68%) by Principal B as opposed to a one way flow 32% of the time (Figure 5). Principal A was high also

on interactive flow (57.9%) but the proportion to one way was more nearly equal (42.1% one way).

In terms of where interventions occurred, both principals reported rather similar use of locations. The percentage of the functions or purposes of their interventions were not in any way parallel. Figure 7 indicates that Principal A employed seven different functions for intervening and Principal B, ten. In information gathering for the purpose of Monitoring and Evaluation the two principals came closest to behaving similarly. Principal B differed by utilizing the functions of Managing/Scheduling, Teaching New Knowledge/Skills, Reporting/Providing Feedback, and Informing Outsiders. Principal A took actions to Encourage/Promote Use by Outsiders, not engaged in by Principal B.

Summarizing their "style." Both principals were characterized by their professional colleagues and acquaintances as being impact-oriented, that is, concerned about improving outcomes, either cognitive or affective, for learners. How they went about accomplishing this goal within the setting of innovation implementation was quite different, though both have been labeled as direct in their methods (Rutherford, 1981).

Principal A's method was to see that materials and equipment were supplied, ordering and delivering them himself. He made himself available, also, as an informed resource person familiar with the innovation itself and its attendant materials and strategies. He did not pressure teachers to use the innovation, but did what he could in non-threatening ways to encourage teacher use. He did not impose himself on teachers during the first year but let them come to him for help which he always delivered vis-a-vis discussion and interaction with the individual teacher. Typically, he placed himself in the hallway to be highly visible and available to teachers to approach him. In addition to providing resources, promoting/encouraging use and reinforcing/supporting use were his

most typical behaviors. This he did by visiting teachers in their classrooms. His mode might be characterized as "responsive encouraging" with his staff.

He demonstrated interest in disseminating the innovation to other sites before his own faculty's first year of use had become established.

Principal B's style in year two with her teachers might be labeled "proactive." She is a user of the innovation at times herself. She plans actions to be taken in a consistent way with all the faculty. She pops into classrooms to observe use and check on materials utilization. She spends much of her time in staffing and restructuring roles to accommodate innovation use, in collecting information about teachers' use and in responding to their problems and needs through consultation with them. She perceives her staff and herself as being mutually engaged in decision-making. She is connected with the innovation, with students and with parents as she employs their participation in the new program.

"Getting a handle" on these principals' behaviors was made possible through use of the CBAM intervention frameworks. The information was collected through interviews, not observation, and was analyzed by use of the Intervention Taxonomy and Anatomy. Using these tools resulted in the specification of the administrators' actions, thus providing more concrete and precise descriptions.

Application of the Intervention Tools for Administrator Skill Development

Use of the frameworks by principals themselves could enhance their change facilitation skills. Making a "game plan" of interventions can help a principal to specify in advance the actions to be taken. The intervention levels with the game plan components (Hord & Loucks, 1980) could be used to consider the design of appropriate actions in the pre-implementation period. Through

staff development, administrators could be trained in developing intervention design skills (Hord, Thurber & Hall, 1981).

Such a map, of course, could be constructed after the fact. This would enable relating the interventions to their various levels and game plan components. It would permit the analysis of the interventions (as was done in this paper) so that presence or absence and frequency at the various levels and components could be ascertained. This would provide insight and feedback to the administrator about his or her behaviors.

Use of the anatomy coding schema could also be useful in planning individual interventions and for post-hoc analysis. By utilizing the schema, administrators could gain a better understanding of the intervention dimension possibilities which might be considered in the design of their actions, thus structuring them for greater effectiveness. Administrators might also use the schema as a device to monitor how, for whom, and for what purposes they spend their time. The administrator who understands and takes into account the intervention dimensions can improve change facilitation skills and can more effectively go about planning actions to support improvement efforts.

In conclusion, there are many questions still to be explored regarding the skills and behaviors of the principal as a change facilitator. The results of the pilot study provided some illumination. This paper has reported a sample of the pilot study results about what principals do and how they do it. The pilot study experiences provided a test of the methodology to be used in a major study and confirmed the usefulness of the constructs and procedures to be employed.

The frameworks for researching and analyzing the principals' behaviors were described; how they were tested as research tools and applied to the data sets was presented. Pilot study research results were reported and from these results the principals' modes of intervening were abstracted. To close the cycle,

how those principals might use the frameworks themselves to improve their skills was suggested. It is hoped that the research reported in this paper may contribute to the description and understanding of the school principals' intervention behavior and role in change in schools.

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